Subject: Re: 2d min
Posted by Gray on Thu, 13 Jan 2011 13:11:50 GMT
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On Jan 13, 7:26 am, Gray <grayliketheco...@gmail.com> wrote:
> On Jan 13, 2:18 am, chris <rog...@googlemail.com> wrote:
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>> On 12 Jan., 23:21, Gray <grayliketheco...@gmail.com> wrote:
>
>>> Hi all,
>
>>> I have a 3d array, NxNxM. What I would like is to find the minimum of
>>> each NxN slice, and note the index of the minimum in the slice. I can
>>> find my minimum by doing min(min(array,ind1,dim=1),dim=1,ind2), but
>>> I'm not sure how to turn those two index arrays into the indices that
>>> I need. Help...?
>
>>> Thanks!
>
>>> --Gray
>
>> Hi,
>> maybe I missed something, but why don't you use something like this:
>
>> IDL> a=randomn(seed,10,10,5)
>> IDL> min=min(a,dimension=3,ind)
>> IDL> help,min,ind
>> MIN FLOAT = Array[10, 10]
>> IND LONG64 = Array[10, 10]
>> IDL> ind2=array_indices(size(a,/dimensions),ind,/dimensions)
>> IDL> help,ind2
>> IND2 LONG64 = Array[3, 100]
>
>> Is array_indices really to slow with the dimension keyword?
>
>> Cheers
>
>> CR
>
> This gets me a NxN array of minima... I want a vector of minima of

> length M (so the minimum in each plane).

OK, for anyone else, here's what you have to do.

```
IDL> a = randomu(seed,10,10,100)
IDL> minima = min(min(a,ind1,dim=1),ind2,dim=2)
IDL> ind1 -= rebin(indgen(1,100)*10^2.,10,100)
IDL> ind2 -= (indgen(100)*10)
IDL> xind = ind1[ind2,indgen(100)] mod 10
IDL> yind = ind2
```

You have to use ind2 to find the right elements of ind1. Since you get 1d indices from min, you need to subtract off N^2 or N to talk about each plane individually. The reason I wanted to vectorize is that my actual M is ~20k.
